SCIENCE COLLABORATIONS ACROSS BORDERS

April 27-28, 2009

The James A. Baker III Institute for Public Policy at Rice University in Houston, Texas—through the Science and Technology Policy Program, the Transnational China Project, and the Technology, Society and Public Policy Program—is hosting a workshop to identify and examine key issues that are important to insuring the most fruitful scientific collaboration among researchers in Asia and on both sides of the Pacific Ocean. Officials and scientists from universities across this large area—from Beijing, Chapel Hill, Hong Kong, Houston, Los Angeles, Nanjing, Shanghai, Singapore, Taipei, Tainan, and Washington DC—are meeting in the Bayou City to discuss ways to facilitate scientific and engineering research across borders. While all participants share an interest in improving cooperation in science and engineering research, a number of policy issues prove problematic. Difficulty in obtaining visas to attend science conferences, the framing of benign projects as security sensitive and even the decentralized research structure in the United States have hindered collaborations across Asia and the Pacific.. As collaboration between researchers in the U.S. and Asia continues to increase in scale and importance, it is essential that any barriers to successful partnerships be identified and corrected wherever possible.

The goal of the workshop is to develop a set of findings and recommendations based on the workshop deliberations that: describe best practices for collaborations; identify cultural and policy barriers; recommend possible actions for universities and granting agencies to promote collaboration; and showcase successful collaborations as models for best practices in the future. The findings and recommendations will be used to produce a Baker Institute policy report to be disseminated to key policymakers and researchers across Asia and the Pacific. (in English and Mandarin).

Through the workshop and report, the Baker Institute also aims to illustrate how current science and technology policies affect research progress in particular fields. In this workshop, we will focus on four: nanotechnology, quantum materials, climate change, and computer and information technology.

ORGANIZING COMMITTEE

- Mr. Neal Lane, Ph.D. (Policy – Chair)
- Mr. Wade Adams, Ph.D. (Nanotechnology)
- Mr. Jack Agee, Ph.D. (Nanotechnology)
- Mr. Chris Bronk, Ph.D. (Policy)
- Mr. Steven Lewis, Ph.D. (Policy)
- Ms. Kirstin Matthews, Ph.D. (Policy)
- Mr. Krishna Palem, Ph.D. (Computer and Information Technology)
- Mr. Qimiao Si, Ph.D. (Quantum Materials)
- Mr. Evan Siemann, Ph.D. (Climate Change)

Support for this program has been generously provided by The Richard Lounsbery Foundation. Additional Travel support was sponsored by the Quantum Materials Lab, Krishna Palem's lab, Evan Siemann's lab and Neal Lane.

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First Day: Monday, April 27

Open Session: Commons

8am - Welcome Address and Breakfast

Edward P. Djerejian, Founding Director, James A. Baker III Institute for Public Policy, Rice University
David W. Leebron, President, Rice University

8:20am – University President's Panel Discussion

Moderator: David W. Leebron, President, Rice University

C.W. "Paul" Chu, Ph.D., Professor, The University of Houston, and President, The Hong Kong University of Science and Technology
Su Guaning, Ph.D., President, Nanyang Technological University
Michael M.C. Lai, M.D., Ph.D., President, National Cheng Kung University

9:40am - Distinguished Morning Address

Small, But International: The Zyvex Nano-Empire

James Von Ehr II, Founder, Chairman and CEO, Zyvex

10:20am – Distinguished Morning Address

Nurturing Scientific Talents in China and USA: Common Goals and Opportunities

Chi-Chih "Andrew" Yao, Ph.D., Professor, Center for Advanced Study, and Director, Institute for Theoretical Computer Science, Tsinghua University, and Distinguished Professor at Large, The Chinese University of Hong Kong

11am - Break

Closed Discussions: Rush Conference Room

11:20 am – Collaborations Models

(15 minutes each – 15 min Q&A at end)

Individual Collaborations– Evan Siemann, Ph.D., Professor of Ecology & Evolutionary Biology, Rice University

Joint Appointments – Krishna Palem, Ph.D., Kenneth and Audrey Kennedy Professor of Computing, Rice University and Director of ISNE, Nanyang Technological University

Virtual Centers – Qimiao Si, Ph.D., Harry C. and Olga Wiess Professor of Physics & Astronomy, Rice University

Agency Organized Collaborations – Forrest Jack Agee, Ph.D., Executive Director of SPRING/CONTACT, Rice University

12:35pm – Lunch (Commons)

Luncheon Remarks- Goals for Workshop and Description of Breakout Sessions

Neal F. Lane, Ph.D., Senior Fellow for Science and Technology Policy, James A. Baker III Institute for Public Policy, Malcolm Gillis University Professor and Professor of Physics & Astronomy, Rice University

2:00 pm - Breakout Session 1

Discussion Questions

I. What are the benefits of international collaborations?
II. What are the motivating factors which lead to successful international collaborations?
III. In your experience, how are collaborations usually funded? Are the barriers to funding important aspects of the collaboration?
IV. Are there any problems with the travel of researchers from one country or region to another?
V. Are there any problems with the transport of equipment or technical information from one place to another or with software or websites being used to transfer information from one place to another?
VI. Are there any other issues that either enhance or hinder successful international research collaboration in your field?

3:45pm - Break (15 minutes)

4:00pm - Full Assembly: Discuss Conclusions from Breakout Groups (Rush Conference Room)

4:30 pm - Breakout Session 2

Discussion Questions

I. How do federal/central government policies impact your abilities to collaborate across national/regional boundaries?
II. What are the optimal roles of various entities for promoting excellence in research and dissemination of research? What role should each of these play in promoting excellence in research and disseminating research?
    A. Federal/Central government agencies
    B. Local, state, provincial governments
    C. Private foundations or commercial enterprises
    D. Universities, Centers, Institutes, and Government Labs

6:15pm - Break

6:30pm - Full Assembly: Discuss Conclusions from Breakout Groups (Rush Conference Room)

7:00 pm - Dinner for Participants (Churassco's)

Second Day: Rush Conference Room

8:00 am – Morning Addresses (20 minutes each – 20 minutes Q&A)

21st Century Science Research

William Y.B. Chang, Ph.D., former director of National Science Foundation (NSF) Beijing

*International Collaborations and A*STAR*

Khiang Wee Lim, Ph.D., Executive Director, Institute of Materials Research and Engineering

9:00 am - Presentation of Preliminary Recommendations

Neal F. Lane, Ph.D., Senior Fellow for Science and Technology Policy, James A. Baker III Institute for Public Policy, Malcolm Gillis University Professor and Professor of Physics & Astronomy, Rice University

9:30 am – Breakout Session 3

Discussion Questions

How would you prioritize the recommendations? (list specific ideas for recommendations after each group for responses)

A. Federal/Central government:
B. Funding agencies:
C. Universities, Centers, Institutes, and Government Labs:

11:00am - Break (15 minutes)

11:15am - Full Assembly: Discuss Conclusions from Breakout Groups

12:30pm - Lunch and Concluding Remarks

The United States and a New Era of Science Diplomacy

Vaughan Turekian, Ph.D., Chief International Officer, American Association for the Advancement of Sciences (AAAS)